

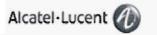
#### Alcatel-Lucent Lauds the Commission's Tentative Conclusions on the Public Safety 700 MHz Band [FCC 07-72]

#### Alcatel-Lucent Position: First Responders Must be Afforded the Significant Benefits of Commercial Broadband Technologies

- "...providing broadband spectrum for advanced public safety communications would best serve our goal of enabling first responders to protect safety of life, health and property." [¶253, FCC 07-72]
- "...only through use of broadband networks could public safety leverage advanced commercial technologies and infrastructure to reduce costs and speed deployment, and enable the potential for priority access to commercial networks during emergencies." [¶253, FCC 07-72]

#### Alcatel-Lucent Position: Broadband Only. Mixed Broadband + Wideband "Flexible" Plans are Inadvisable

- "... such flexibility could hinder efforts to deploy a nationwide, interoperable broadband network by perpetuating a balkanization of public safety spectrum licenses, networks, and technology deployment." [¶253, FCC 07-72]
- "We ... reallocate **spectrum** previously designated for wideband **use** for broadband **use** only, and prohibit wideband **operations** on a going forward **basis**" [¶253, FCC 07-72]



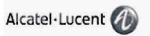
#### Alcatel-Lucent Lauds the **Commission's** Tentative **Conclusions** on the Public Safety **700 MHz** Band [FCC 07-72]

Alcatel-Lucent Position: Deployment of Broadband Network Must be Based on a Nationwide Standard Leveraging Commercial Broadband Technologies

"...we believe that only broadband applications consistent with a nationwide interoperability standard should be deployed in the current wideband allocation of the 700 MHz band." [¶253, FCC 07-72]

Alcatel-Lucent Position: Narrowband Spectrum Should Be Consolidated to Upper Portion of the Public Safety 700 MHz Allocation

• "Further, should we adopt this broadband approach, we tentatively conclude that we should consolidate the existing narrowband allocations to the upper half of the 700 MHz Public Safety Band." [¶250, FCC 07-72]



#### Alcatel-Lucent Further Recommendations

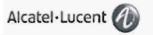
#### Quick Decision Required on Public Safety 700 MHz Band Plan

- Minimum channel size of 1.25 MHz with aggregation up to 5 MHz
- Internal guardband size based on broadband and narrowband coordination
- Access method limited to Frequency-Division-Duplex (FDD)
- Broadband emission limits on par with commercial broadband

#### Quick Decision Required on the Public Safety Operator Model

#### **Nationwide Public Safety Broadband Standard**

- Technology Selection in Advance of Spectrum Clearance Date
- Open and Transparent Technology Selection Process





### Appendix

## Broadband vs. Wideband

Today's Broadband Technologies are >10 Times More Spectrally €Hfic ent than Wideband

Technologies Offer Ranges Comparable to Wideband (TIA-902) At Like Data Rates and Coverage Criteria, Today's Broadband

 Sroadband technologies are the right answer for urban, suburban and rural environments

Broadband Technologies offer Cost Advantages Absent in Wideband Technologies

- Scale economies through re-banding of existing commercial broadband technologies
- Robust, competitive ecosystem largely absent from today's public safety market



# Pitfalls of Mixed Broadband + Wideband Band Plans

Spectrum Managed locally (flexibility) with <u>nationwide</u> implications:

- Broadband + Wideband Hampers Interoperability
- Multimode devices required, network evolution hampered
- **Broadband + Wideband Fragments Greenfield Spectrum**
- Preserving contiguous blocks of broadband spectrum today essential for use of broadband technologies tomorrow
- Broadband + Wideband Wastes Spectrum
- Broadband technologies today are an order of magnitude more spectrally efficient than wideband. This gap will continue to widen.

and supporting more simultaneous users, on a broadband network (while the "...any application that will run on a wideband network can also run, faster reverse is not necessarily true)."

8<sup>th</sup> NPRM Comments of the Spectrum Coalition for Public Safety (Docket 96-86)



#### Benefits of a Broadband-only Plan

Makes Best Use of Limited Public Safety Spectrum Encourages Deployment of Cooperative Regional Networks

- Increased Spectral efficiency through use of spectrally efficient broadband technologies, pooling of spectrum resources
- Cross-Agency, Cross-Jurisdiction Interoperability by design
  - E.g., National Capital Region's Regional Wireless Broadband Network

Aligns Public Safety Broadband with Commercial Market Forces

Scale Economies, R&D investment

Easier Frequency Planning

Same channels used in adjacent sectors

Supports All Envisaged Public Safety Applications

